

AN ISLAND CALLED INDIA: PHYLOGENETIC PATTERNS ACROSS MULTIPLE PLANT GROUPS REVEAL ENDEMIC RADIATION

The Department of Botany at Mount Carmel College organized an insightful guest lecture on 18th January 2024. The lecture, titled "An Island Called India: Phylogenetic Patterns Across Multiple Plant Groups Reveal Endemic Radiation," was delivered by the eminent Dr. Praveen Karanth, Professor at the Center for Ecological Sciences, Indian Institute of Science, Bengaluru. The event witnessed an enthusiastic participation of around 150 students from both undergraduate and postgraduate programs in Botany and Life Sciences.

Dr. Praveen Karanth, a distinguished researcher in the field of phylogenetics and evolutionary biology, captivated the audience with his expertise and engaging presentation. The talk focused on the unique phylogenetic patterns observed across various plant groups in India, emphasizing the concept of endemic radiation. Dr. Karanth began by providing a foundational understanding of phylogenetics, explaining how evolutionary relationships among species are inferred using genetic data and morphological characteristics.

The central theme of the lecture revolved around India's distinct biogeography, which has fostered the evolution of several endemic plant species. Dr. Karanth illustrated how India, often referred to as an "island" due to its unique geographical and climatic history, has served as a cradle for speciation and adaptive radiation in plants. Using vivid case studies and phylogenetic trees, he demonstrated how multiple plant groups have diversified within India, leading to the formation of endemic lineages that are not found elsewhere in the world.

One of the highlights of the lecture was the discussion on the Gondwanan origin of the Indian subcontinent and its subsequent drift, which played a pivotal role in shaping the country's flora. Dr. Karanth elaborated on the ecological and evolutionary factors driving these diversification processes, including climatic shifts, habitat fragmentation, and interactions with other biota. He also highlighted the importance of molecular tools and genomic studies in unravelling these phylogenetic patterns, enabling a deeper understanding of India's rich biodiversity.

The students were particularly inspired by Dr. Karanth's emphasis on the conservation implications of his findings. He underscored the urgent need to protect India's endemic species and their habitats, given the increasing threats posed by habitat loss and climate change. The lecture concluded with an interactive session where students eagerly posed questions about phylogenetic methodologies, conservation strategies, and India's evolutionary history. Dr. Karanth's detailed and thought-provoking responses further enriched the learning experience.

The event was a remarkable success, providing the students with a comprehensive understanding of India's evolutionary landscape and the significance of phylogenetics in biodiversity studies. The Department of Botany extended its gratitude to Dr. Praveen Karanth for his invaluable contribution and to the students for their enthusiastic participation. The lecture not only deepened their academic knowledge but also instilled a sense of responsibility towards preserving India's unique and irreplaceable biodiversity.



A Seminar by Dr. Praveen
Karanth

